IN THE SPECIFICIATION

Please replace paragraphs 50 and 51 from page 14 and paragraph 56 on page 17 as follows:

[0050] FIG. 5 illustrates a plot 34 of a probability density function P(D) of a normalized distance $D=d/(a\sqrt{n})$ between any two points for the phoneme class /aa/ in a TIMIT database. As is shown in ~~FIG. 6~~ FIG. 5, for n = 160, the standard deviation $\sigma = 0.079$. The mean and standard deviation for this case were found to be 1.422 and 0.079 respectively. The results of studying other phone classes were similar to that shown in FIG. 4 with standard deviations ranging from 0.070 to 0.092.

[0051] FIG. 6 illustrates a plot 38 of a probability density function of a normalized distance $D = d/(a\sqrt{n})$ from the center of a multi-dimensional space for a phoneme class /aa/ in the TIMIT database. As is shown in ~~FIG. 5~~ FIG. 6, for n = 160, the standard deviation is σ = 0.067. Computer simulation results for a Gaussian distribution show that the values of σ corresponding to the cases disclosed in FIGS. 5 and 6 are 0.078 and 0.056 respectively.

[0056] The graph 40 of FIG. 8 is a two-dimensional representation associated with the /aa/ phoneme converted into spherical 160 dimensional space. The boundaries in the figure do not show sharp edges because the figure displays the points in a two-dimensional space. The boundaries, however, are very sharp in the 160 dimensional space as reflected in the distribution of distances of the points from the center of the sphere in ~~FIG. 6~~ FIG. 8 where the distances from the center have a mean of 1 and a standard deviation of 0.067. The selection of 160 dimensional space is not critical to the present invention. Any large dimension capable of being processed by current computing technology will be acceptable according to

the present invention. Therefore, as computing power increases, the "n" dimensional space used according to the invention will also increase.